

CHAMBERS'S JOURNAL

OF
POPULAR
LITERATURE, SCIENCE, AND ART

Fifth Series

ESTABLISHED BY WILLIAM AND ROBERT CHAMBERS, 1832

CONDUCTED BY R. CHAMBERS (SECUNDUS)

No. 60.—VOL. II.

SATURDAY, FEBRUARY 21, 1885.

PRICE 1½d.

CAMPAINING AT HOME.

REMINISCENCES OF THE SCOTTISH ORDNANCE SURVEY.

STAY-AT-HOMES read with wonder the adventures of those that 'go down to the sea in ships,' and of arduous campaigns abroad; while they also sympathise readily with the sufferings, hardships, and dangers reported from distant lands. Has it ever occurred to any considerable number of people, outside those actually concerned therein, that for many years a campaign of no mean difficulty was till recently carried on within the borders of our own 'tight little island?' We refer to the Ordnance Survey of the Highlands and Islands of Scotland. This interesting undertaking has now been some few years completed. We do not propose to enter into any account of the origin, methods, or objects of the enterprise, but merely, by a few rapid sketches, to convey to the reader some idea of the mode of life to which the workers had to submit during its progress; in the hope of awakening some share of interest in and respect for the toils cheerfully gone through, and the hardships bravely borne by a small body of our fellow-countrymen in scenes not far from our own doors.

For many reasons, camping-out was decided on as the most suitable way of accommodating the surveyors. In a thinly populated country, lodgings would be difficult to find, and the men of a party would become so scattered that efficient supervision of the whole would be impossible. The tents and camp equipage—bed-stretchers, blankets, cook-house, and cooking utensils—were of a superior kind to those issued to soldiers in the field, consisting, in fact, of those allotted for hospital purposes and officers' quarters. In a word, everything was provided with intelligent consideration for the comfort of the men, so far as that was possible.

From point to point, then, through the picturesque scenes of the North, the parties wandered for nearly twenty years, pitching by running streams or wild tarns in the most

sheltered nooks they could find. Each morning brought the usual eight o'clock parade, the men having previously breakfasted; and each surveyor and his chainman was dismissed to his appointed task on the adjacent mountains. One of our number was left behind as a cook and camp-watch, to clear up the tents, make the beds, and provide dinner for the men against their return in the evening. Their lunch they carried with them. After their late dinner, the surveyors had their field-books to make up, diagrams to draw out, and the work to 'reference.' Hardy, light-hearted and sociable, the rest of the long summer or autumn evenings was spent sometimes in quoiting, 'putting' the stone, and other exercises; sometimes in visiting by twos or threes the nearest 'clachans'; and sometimes in getting up an improvised dancing-match to the music of a concertina. Reading and letter-writing were generally left to wet days, when, it may be stated, the men were not required to turn out.

Those wet days! They were now and then wet weeks, and even months, at a stretch. Such incontinent skies are surely nowhere else to be found but in the Western Highlands. The men welcomed a wet day or two now and then in the sincerest way; their tired feet got rested, and they could overtake arrears of correspondence or of 'book'-work; but beyond the second day their miseries began. The ground around and even inside the tents became a mire; the canyas hung dank and dripping; the stove-pipes would draw on no consideration; the meat got 'high,' and the bread mouldy; tempers got soured, and genuine British grumbling set in. The concertina, the song, and the book kept the demon of *ennui* at bay for a time; but a second or third week of the deluge and inactivity combined let him slowly but surely inside the camp. The quiet ones moped, and the more gritty ones growled. We draw the curtain over the remainder of a six or seven weeks' rain-blockade.

In December 1873, the Director-general of the Ordnance Survey—Sir Henry James—stated in

the Blue-book for that year that 'the mainland of Scotland had been completed, and the survey of the islands of Skye and Mull been entered upon.' When this bald announcement was made, those best able to judge of the nature of the work prophesied that the survey of the Hebrides, Orkneys, and Shetlands would cost a number of valuable lives. Happily, the prophecy was not fulfilled, while the work has been done in excellent style. Only one life was lost by drowning, and even that was not strictly due to the hazards of the work. To all concerned, this is simply a marvel; and the fact that there was not a single case of broken limbs, and only one death from natural causes, makes the record more remarkable still.

Nevertheless, the task of surveying the islands was a fresh departure in the way of additional discomforts, dangers, and anxieties. It is therefore from this period that we draw a few sketches at random from the thousand subjects that readily occur to us. The work in the islands was perhaps little harder in itself than much of that already completed on the mainland. The two chief hardships that presented themselves for the first time were, greater isolation and the more frequent and more hazardous boating excursions which the duties involved. The parties were now also almost invariably farther from any base of supply. As a rule, sufficient provisions of a kind and at a price could still be obtained, but there was much uncertainty in their delivery, owing to the weather and the want of punctuality on the part of the caterers. At times, the men had to subsist for weeks together on tea, oatmeal cakes, and eggs. Fresh meat in some instances was not obtainable in any weather or at any price, so that some sections of the workers had to pursue their exceptionally arduous duties for a whole season together on bread and 'groceries.'

The 'sappers,' as they were generically styled, whether Royal Engineers, civil assistants, or labourers, had already had some taste and experience of boating on the oftentimes tempestuous Highland lochs, as well as off the grim coast of Ardnamurchan, where, when the wild north winds blow, the sea-view is one of the most awful that can be witnessed around our shores. But now, among the islands, rowing across ugly creeks or round some headland or other was often a part of their daily task. Although a calm morning was usually selected for starting on such expeditions, the weather, as may be supposed, did not always fulfil its augury. The return voyages were often of the most perilous nature. Frequent hairbreadth escapes thus occurred, the narratives of which would well compare in romantic interest with many boasted tales of the sea.

Hitherto, the hill-work and camp-life had been restricted to the summer and autumn months; but in the winter of 1874-75—the year of the great snow-storm, when a train was entombed for three days on the Highland line—an order was issued that the work in the islands should be henceforth prosecuted without stoppage until its final completion. There was no help for it: the men stuck to their tents as long as the tents stuck to them, working intermittently, as the weather would permit. Imagine, then—merely as an example—a small encampment, at Christmas-time

of that year, standing on the north-west shore of solitary Loch Buie, in Mull, coals and provisions short, the nearest village fourteen miles distant. There was no help for it, as we have said; till, on one of the last nights of the year, a more than usually wild tempest swept round the fir-clad hills that tower above the loch, tearing up trees by the roots, hurling masses of rock into the tarn, and lashing the waters into a seething expanse of furious foam. The rain-like sleet was a whirling torrent. After examining the guy-ropes and pickets of the tents with unwonted care, the drenched and wearied surveyors had turned into their cheerless stretchers, but not to sleep. From time to time a gust would strike the canvas with such violence as to threaten the instant destruction of the camp. The miserable task of turning out in that awful night to refasten pickets and slacken guys had to be repeated every few minutes for hours together. A lull came about two in the morning, and the men were just congratulating each other that the worst was over, when, with a crescendo whistle of warning, the storm leapt down the mountain side with redoubled fury, crashing and overthrowing everything on its way. With a succession of loud reports, the canvases split and the tents were overturned. The poor 'sappers' were left in 'storm and night and darkness,' undressed, on their stretchers. Their clothing was scattered far and wide. Their experiences till daylight may be better imagined than described.

The heroes of the above episode, together with other parties, who had fared little better during the winter, had a brief respite from hardship in the spring of 1875 in the beautiful island of Islay, with its large area of cultivated land and succession of low undulating hills. The number of large villages—or small towns—which it contains admitted of the men dispensing with tents and enjoying the luxury of lodgings. Those were red-letter days for them. They entered with zest into the almost forgotten enjoyments of civilised life. Pleasant may their memories be! But even Islay had its adventures. The stormy wreck-strewn shores of Loch an Dahl—an arm of the sea whose terrors are known to all west-coast mariners—very nearly saw the end of several men whose temerity tempted its waters when in angry mood. The poor, brave pilot of Port Charlotte, who frequently gave his solemn warning to the foolhardy, has since found his own grave at the bottom of the treacherous loch, of which he may be said to have been custodian.

Thence to Jura. This, as is well known, is an interesting island in many respects. Two gracefully rounded hills rise like twin sugar-loaves from either shore; while the 'raised beaches,' as geologists term them, which are found in the western district, at an elevation of many hundred feet above the present sea-level, the famous Corryvreckan whirlpool, between its northern shore and the island of Scarba, and its romantic coast-line and surrounding seas, give to Jura an exceptional interest both to the artist and the scientist. But to those who surveyed it for Ordnance purposes, the delights were indeed few and far between. The men so engaged, however, received many kindnesses from the proprietors, which, in their simple hearty way, they delight to recall.

Picture a camp, occupied by some twenty men, perched eyrie-like amongst a high, shapeless mass of rocks on the north-western side of the island ; not a house within ken ! Provisions and coal could only be obtained by smack from Port Askaig, in Islay, and that only when weather and accidents permitted. The men had a spell of three months in this delectable spot, and the ground they had to survey was probably as bad as any that chain was ever dragged over or theodolite ever stood upon. Fancy, in addition, three weeks of incessant rain under such circumstances ! Rare opportunity for Mark Tapleys !

A second party had pitched their tents on a small stretch of fine pasture in a sheltered bight, just at the junction of the Sound of Jura and the Gulf of Corryvreckin, within earshot of the incessant din of the dreaded Corry. Near by, at the top of the grassy slope on which the camp stood, there were four small thatched cottages, one of which was occupied by that prince of boatmen and stoutest of hearts, old Colin Shaw. It was a snug spot, with various splendid sea prospects : the Corry itself, the waters around which seemed, to the naked eye, to prance like a brigade of cavalry with the white plumes nodding on their helmets ; the Sound, dotted with steamers and craft of every description ; the distant Bay of Crinan, with its breakwater of small, low-lying islands ; and the cloud-capt precipices of inhospitable Scarba. So far, so well ; and those blessings were appreciated. But bread and groceries had to be brought to them eight miles by cart, and then another eight miles by sea, while fresh meat, or, indeed, meat of any kind, was not to be had on the island. This fact, and three weeks of a deluge, sponged a considerable deal of the rose-hue from the picture. Again, the boating ! There had well need be a first-class boatman at Kinachdrach. The run from that point to the only landing-spot on Scarba is probably as ticklish a bit of manœuvring as can well be conceived even by professionals, and that, too, in moderately fine weather ; but in a stiff gale, thefeat is one scarcely to be undertaken, and is seldom attempted. It had to be done, however, on many occasions, on one of which, a perilously near shave was made in avoiding being swept through the gulf and into the vortex of the whirlpool, not two miles distant. The task of surveying an outlying ridge of rocks near the Corry was done ; but a little more than coaxing was needed to get the surveyor to undertake it. A calm day was chosen, and the run made at the slack of the tide, under which circumstances a yacht, or even a large sail-boat, can run the gauntlet of the whirlpool itself.

After a few weeks of lenten fare, the men of this party began naturally enough to long for the fleshpots. They were not supplied by the authorities with provisions, but 'found' for themselves in whatever way they could out of their full pay, the portage of the week's supply alone being chargeable in the accounts. Their caterer in the present instance was at 'Small Isles,' and could provide no meat ; on the other hand, the hire of a boat to make a separate journey to the mainland in search of that commodity would have to be borne by themselves. After growling at this dilemma for some weeks

longer, they resolved to despatch a quest-party, and one wet day engaged Colin Shaw and his large boat for the occasion. Kinachdrach in the island of Jura is distant from Crinan on the mainland about eleven miles. The men had to row the whole distance, the old boatman acting as steersman, with a tide running southerly with great velocity. The boat was a heavy one, and the two oarsmen had therefore their work cut out for them. When they had gone about three parts the distance, Colin began to look anxious and to urge them to pull as hard as they were able. There was a low reef of rocks which he wished to pass on the north side. The men made a spurt ; but just as they seemed likely to row well clear of the danger, one of them 'caught a crab,' and fell backwards into the bottom of the boat. Quick as lightning, but with a face pale and set, Colin dropped the tiller, sprang to the bows, seized a rope, and leapt on to the nearest point of the ridge, to which the boat had miraculously escaped coming broad-side on ! And there, in mid-channel of the Sound of Jura, against a strong tide, the three men had to haul the boat round and clear of the reef before they could resume their journey, which, however, they finished in safety, and, after a drive of eight miles to Lochgilphead, succeeded in laying in a store of mutton, which they brought triumphantly to camp.

As we have said, we can only indicate by a few glimpses the hard circumstances under which much of the survey of the islands was effected. Pen would fail to describe the terrible discomfits, privations, and miseries that the surveyors endured during their 'shifts' from one island to another. The journeys to Colonsay, Tiree, Coll, Rum, Barra, &c., were each of them small 'expeditions' in themselves, in the sense in which that term has lately come to be applied. Exposure in open boats, oftentimes in wet and boisterous weather ; landings, some of them at midnight, on unknown beaches or amongst rocks, with several tons of stores and valuable instruments in charge ; and the impossibility of obtaining any but the meagrest fare at any time, gave to the task a grimness and severity which many a campaign in earnest has not possessed—and without the glory. The inhabitants were almost invariably kindly in manner to the strangers ; but, in strict truth, gave nothing but their goodwill for nothing ; on the contrary, they always drove pretty hard bargains with the 'sappers.' Those of the parties who could speak Gaelic fared best, and were alone able to enjoy such little society as these solitudes afforded.

It is a far cry from Jura to Orkney. The different parties met by appointment in smacks one evening at a given point off the Jura coast, and lay-to all night, waiting for the steamer from Glasgow, which was to pick them up. About midnight of the second day after, they reached Scraibster in the far north, debarked and unloaded, and, after the Sunday's rest, began at midnight to get their stores on board the *Express* steamer, which sailed next morning for Stromness. There, orders awaited them to take up the Orkney stations allotted to them. Stores were once more landed, provisions and coal hurriedly purveyed, a smack for one, and a string of carts for another party hired, and the loading

process was again repeated. The party with the carts went inland; that with the smack sailed for the island of Hoy. On arriving, the smack could not be run up to the pier on account of the tide. The stores were landed by small boats, and transferred to a procession of twenty-five of the small carts used in the island; and then the tired party marched up the desolate valley of Rackwick to their camping-ground. Not a bale was opened nor a fire lit that night. Overcome with fatigue, the entire party bivouacked on the peat-moss, and next morning they began the detail-survey of the Orkneys.

The precipitous island of Hoy was finished in a fortnight, and then a pleasanter time began; for the remainder of the Orkney Islands, mostly flat and under cultivation, presented little but easy work; while the numerous villages, and the warm hospitality of an English-speaking race, afforded a most agreeable change from the uncouth surroundings of the Hebrides. There was, of course, plenty of boating, and plenty of stormy weather to do it in. The north-east winds and the strong tidal currents that sweep between the islands make sailing amongst them exceptionally hazardous to all but the natives. The islanders are, however, aquatic from their birth. The children are as familiar with a boat as an agricultural labourer's children are with a horse. The boats themselves, too, are of the handiest and most seaworthy kind, so that the dangers of the coasting expeditions were minimised. There are adventures of an exciting kind to tell, but these can find no place in our already exhausted space.

The Shetlands presented to the surveyors once more the hard work and hard living they had so long undergone, the scant society and vexations and perilous coast-work. The kindly natives, however, did all they could to make the stay of their strange visitors as pleasant as possible, and many agreeable memories of the expedition remain.

In concluding a necessarily brief article on a large subject, we trust that the impression has not been conveyed that the hardships described were treated by the men as though they deserved commiseration. This would be far from the fact. A trouble, a difficulty, a danger passed, fell at once into the limbo of history; the humorous, the grotesque side of each adventure alone remained. They are now surveying 'fresh woods and pastures new' in some of England's fairest counties. They 'fight their battles o'er again' with zest, but without complaint, and indeed appear to have a lingering fondness for the recollections associated with their long campaign near home.

A HOUSE DIVIDED AGAINST ITSELF.

CHAPTER VIII.

'It is not because of this only, papa—I wanted before to speak to you. I was waiting in the loggia for you—when Constance came.'

'What did you want, Frances?—Oh, I quite acknowledge that you have a right to inquire. I hoped, perhaps, I might be spared to-night; I am rather exhausted—to-night.'

Frances dropped the hand which she had laid upon his arm. 'It shall be exactly as you please,

papa. I seem to know a great deal—oh, a great deal more than I knew at dinner. I don't think I am the same person; and I thought it might save us all, if you would tell me—as much as you think I ought to know.'

She had sat down in her usual place, in her careful little modest pose, a little stiff, a little prim—the training of Mariuccia. After Constance, there was something in the attitude of Frances which made her father smile, though he was in no mood for smiling; and it was clear that he could not, that he ought not to escape. He would not sit down, however, and meet her eye. He stood by the table for a few minutes, with his eyes upon the books, turning them over, as if he were looking for something. At last he said, but without looking up: 'There is nothing very dreadful to tell; no guilty secret, though you may suppose so. Your mother and I—'

'Then I have really a mother, and she is living?' the girl cried.

He looked at her for a moment. 'I forgot that for a girl of your age that means a great deal—I hadn't thought of it. Perhaps if you knew—Yes; you have got a mother, and she is living. I suppose that seems a very wonderful piece of news?'

Frances did not say anything. The water came into her eyes. Her heart beat loudly, yet softly, against her young bosom. She had known it, so that she was not surprised. The surprise had been broken by Constance's careless talk, by the wonder, the doubt, the sense of impossibility, which had gradually yielded to a conviction that it must be so. Her feeling was that she would like to go now, without delay, without asking any more questions, to her mother. Her mother! and he hadn't thought before how much that meant to a girl—of her age!

Mr Waring was a little disconcerted by having no answer. Of course it meant a great deal to a girl; but still, not so much as to make her incapable of replying. He felt a little annoyed, disturbed, perhaps jealous, as Frances herself had been. It was with difficulty that he resumed again; but it had to be done.

'Your mother and I,' he said, taking up the books again, opening and shutting them, looking at the title-page now of one, now of another, 'did not get on very well. I don't know who was in fault—probably both. She had been married before. She had a son, whom you hear Constance speak of as Markham. Markham has been at the bottom of all the trouble. He drove me out of my senses when he was a boy. Now he is a man, so far as I can make out it is he that has disturbed our peace again—hunted us up, and sent Constance here.—If you ever meet Markham—and of course now you are sure to meet him—beware of him.' Here he made a pause again, and looked with great seriousness at the book in his hand, turning

the leaf to finish a sentence which was continued on the next page.

'I beg your pardon, papa,' said Frances; 'I am afraid I am very stupid. What relation is Markham to me?'

He looked at her for a moment, then threw down the book with some violence on the table, as if it were the offender. 'He is your step-brother,' he said.

'My—brother? Then I have a brother too?' After a little pause she added: 'It is very wonderful, papa, to come into a new world like this all at once. I want—to draw my breath.'

'It is my fault that it comes upon you all at once. I never thought— You were a very small child when I brought you away. You forgot them all, as was natural. I did not at first know how entirely a child forgets; and then—then it seemed a pity to disturb your mind, and perhaps set you longing for—what it was impossible for you to obtain.'

It surprised him a little that Frances did not breathe a syllable of reproach. She said nothing. In her imagination she was looking back on these years, wondering how it would have been had she known. Would life ever be the same, now that she did know? The world seemed to open up round her, so much greater, wider, more full than she had thought of. She had not thought much on the subject. Life in Bordighera was more limited even than life in an English village. The fact that she did not belong to the people among whom she had spent all these years, made a difference; and her father's reclusive habits, the few people he cared to know, the stagnation of his life, made a greater difference still. Frances had scarcely felt it until that meeting with the Mannerings, which put so many vague ideas into her mind. A child does not naturally inquire into the circumstances which have surrounded it all its life. It was natural to her to live in this retired place, to see nobody, to make amusements and occupations for herself; to know nobody more like herself than Tasie Durant. Had she even possessed any girl-friends living the natural life of youth, that might have inspired a question or two. But she knew no girls—except Tasie, whose girlhood was a sort of fossil, and who might almost have been the mother of Frances. She saw indeed the village girls, but it did not occur to her to compare herself with them. Familiar as she was with all their ways, she was still a *forestiere*, one of the barbarous people, English, a word which explains every difference. Frances did not quite know in what the peculiarity and eccentricity of the English consisted; but she, too, recognised with all simplicity that being English, she was different. Now it came suddenly to her mind that the difference was not anything generic and general, but that it was her own special circumstances, that had been unlike all the rest. There had been a mother all the time; another girl, a sister, like herself. It made her brain whirl.

She sat quite silent, thinking it all over, not perceiving her father's embarrassment, thinking less of him, indeed, than of all the wonderful new things that seemed to crowd about her. She did not blame him. She was not, indeed, thinking enough of him to blame him; besides that

her mind was not sufficiently developed for retrospection. As she had taken him all her life without examination, she continued to take him. He was her father; that was enough. It did not occur to her to ask herself whether what he had done was right or wrong. Only, it was all very strange. The old solid earth had gone from under her feet, and the old order of things had been overthrown. She was looking out upon a world not realised—a spectator of something like the throes of creation, seeing the new landscape tremble and roll into place, the heights and hollows all changing; there was a great deal of excitement in it, both pain and pleasure. It occupied her so fully, that he fell back into a secondary place.

But this did not occur to Waring. He had not realised that it could be possible. He felt himself the centre of the system in which his little daughter lived, and did not understand how she could ignore him. He thought her silence, the silence of amazement and excitement and of that curious spectatorship, was the silence of reproach, and that her mind was full of a sense of wrong, which only duty kept in check. He felt himself on his trial before her. Having said all that he had to say, he remained silent, expecting her response. If she had given vent to an indignant exclamation, he would have been relieved; he would have allowed that she had a right to be indignant. But her silence was more than he could bear. He searched through the recesses of his own thoughts; but for the moment he could not find any further excuse for himself. He had done it for the best. Probably she would not see that. Waring was well enough acquainted with the human mind to know that every individual sees such a question from his or her own point of view, and was prepared to find that she would be unable to perceive what was so plain to him. But still he was aware that he had done it for the best. After a while the silence became so irksome to him that he felt compelled to break it and resume his explanation. If she would not say anything, there were a number of things which he might say.

'It is a pity,' he said, 'that it has all broken upon you so suddenly. If I ever could have divined that Constance would have taken such a step— To tell you the truth, I have never realised Constance at all,' he added with an impulse towards the daughter he knew. 'She was of course a mere child—to see her so independent, and with so distinct a will of her own, is very bewildering. I assure you, Frances, if it is wonderful to you, it is scarcely less wonderful to me.'

There was something in the tone that made her lift her eyes to him; and to see him stand there so embarrassed, so subdued, so much unlike the father, who, though very kind and tender, had always been perhaps a little condescending, patronising, towards the girl, whom he scarcely recognised as an independent entity, went to her heart. She could not tell him not to be frightened; not to look at her with that guilty, apologetic look, which altogether reversed their ordinary relationship; but it added a pang to her bewilderment. She asked hastily, by way of concealing this uncomfortable change, a question which she thought he would have no

difficulty in answering: 'Is Constance much older than I am, papa?'

He gave a sort of furtive smile, as if he had no right to smile in the circumstances. 'I don't wonder at your question. She has seen a great deal more of the world. But if there is a minute or two between you, I don't know which has it. There is no elder or younger in the case. You are twins, though no one would think so.'

This gave Frances a further shock, though why, it would be impossible to say. The blood rushed to her face. 'She must think me—a very poor little thing,' she said in a hurried tone. 'I never knew—I have no friend except Tasie—to show me what girls might be.' The thought mortified her in an extraordinary way; it brought a sudden gush of soft tears, tears quite different from those which had welled to her eyes when he told her of her mother. Constance, who was so different, would despise her—Constance, who knew exactly all about it, and that Frances was as old, perhaps a few minutes older than she. It is always difficult to divine what form pride will take. This was the manner in which it affected Frances. The same age; and yet the one an accomplished woman, judging for herself; and the other not much more than a child.

'You do yourself injustice,' said Mr Waring, somewhat rehabilitated by the mortification of Frances. 'Nobody could think you a poor little thing. You have not the same knowledge of the world. Constance has been very differently brought up. I think my training a great deal better than what she has had,' he added quickly, with a mingled desire to cheer and restore self-confidence to Frances, and to re-assert himself after his humiliation. He felt what he said, and yet, as was natural, he said a little more than he felt. 'I must tell you,' he said in this new impulse, 'that your mother is—a much more important person than I am. She is a great deal richer. The marriage was supposed to be much to my advantage.'

There was a smile on his face, which Frances, looking up suddenly, warned by a certain change of tone, did not like to see. She kept her eyes upon him instinctively, she could not tell why, with a look which had a certain influence upon him, though he did not well understand it either. It meant that the unknown woman of whom he spoke was the girl's mother—her mother—one of whom no unbefitting word was to be said. It checked him in a quite curious unexpected way. When he had spoken of her, which he had done very rarely since they parted, it had been with a sense that he was free to characterise her as he thought she deserved. But here he was stopped short. That very evening he had said things to Constance of her mother which in a moment he felt that he dared not say to Frances. The sensation was a very strange one. He made a distinct pause, and then he said hurriedly: 'You must not for a moment suppose that there was anything wrong; there is no story that you need be afraid of hearing—nothing, neither on her side or mine—nothing to be ashamed of.'

All at once Frances grew very pale; her eyes opened wide; she gazed at him with speechless horror. The idea was altogether new to her artless mind. It flashed through his that Constance would not have been at all surprised; that pro-

bably she would have thought it 'nice of him' to exonerate his wife from all moral shortcoming. The holy ignorance of the other brought a sensation of shame to Waring, and at the same time a sensation of pride. Nothing could more clearly have proved the superiority of his training. She would have felt no consternation, only relief at this assurance, if she had been all her life in her mother's hands.

'It is a great deal to say, however, though you are too inexperienced to know. The whole thing was incompatibility—incompatibility of temper, and of ideas, and of tastes, and of fortune even. I could not, you may suppose, accept advantages purchased with my predecessor's money, or take the good of his rank through my wife; and she would not come down in the world to my means and to my name. It was an utter mistake altogether. We should have understood each other beforehand. It was impossible that we could get on. But that was all. There was probably more talk about it than if there had been really more to talk about.'

Frances rose up with a little start. 'I think, perhaps,' she said, 'I don't want you to tell me any more.'

'Well—perhaps you are right.' But he was startled by her quick movement. 'I did not mean to say anything that could shock you. If you were to hear anything at all, the truth is what you must hear. But you must not blame me overmuch, Frances. Your very impatience of what I have been saying will explain to you why I thought that to say nothing—as long as I could help it—was the best.'

Her hand trembled a little as she lighted her candle; but she made no comment. 'Good-night, papa. To-morrow it will all seem different. Everything is strange to-night.'

He put his hands upon her shoulders and looked down into the little serious face, the face that had never been so serious before. 'Don't think any worse of me, Frances, than you can help.'

Her eyes opened wider with astonishment. 'Think of you, worse— But, papa, I am not thinking of you at all,' she said simply; 'I am thinking of *it*.'

Waring had gone through a number of depressing and humbling experiences during the course of the evening; but this was the unkindest of all—and it was so natural. Frances was no critic. She was not thinking of his conduct, which was the first thing in his mind, but of *it*, the revelation which had been made to her. He might have perceived that, or divined it, if he had not been occupied by this idea, which did not occupy her at all—the thought of how he personally had come through the business. He gave a little faltering laugh at himself as he stooped and kissed her. 'That's all right,' he said. 'Good-night; but don't let *it* interfere with your sleep. To-morrow everything will look different, as you say.'

Frances turned away with her light in her hand; but before she had reached the door, returned again. 'I think I ought to tell you, papa, that I am sure the Durants know. They said a number of strange things to me yesterday, which I think I understand now. If you don't mind, I would rather let them suppose

that I knew all the time; otherwise, it looks as if you thought you could not trust me.'

'I could trust you!'—he said with a little fervour, 'my dear child, my dear little girl, I would trust you with my life.'

Was there a faint smile in the little girl's limp simple eyes? He thought so, and it disconcerted him strangely. She made no response to that protestation, but with a little nod of her head, went away. Waring sat down at the table again and began to think it all over from the beginning. He was sore and aching, like a man who has fallen from a height. He had fallen from the pedestal on which, to Frances, he had stood all these years. She might not be aware of it even, but he was. And he had fallen from those Elysian fields of peace in which he had been dwelling for so long. They had not, perhaps, seemed very Elysian while he was secure of their possession. They had been monotonous in their stillness, and wearied his soul. But now that he looked back upon them, a new cycle having begun, they seemed to him like the very house of peace. He had not done anything to forfeit this tranquillity, and yet it was over, and he stood once more on the edge of an agitated and disturbed life. He was a man who could bear monotony, who liked his own way, yet liked that bondage of habit which is as hard as iron to some souls. He liked to do the same things at the same time day after day, and to be undisturbed in doing them. But now all his quiet was over. Constance would have a thousand requirements such as Frances had never dreamed of; and her brother no doubt would soon turn up, that step-brother whom Waring had never been able to tolerate even when he was a child. She might even come, Herself—who could tell?

When this thought crossed his mind, he got up hastily and left the salone, leaving the lamp burning, as Domenico found it next morn, to his consternation—a symbol of Chaos come again—burning in the daylight. Mr Waring almost fled to his room and locked his door in the horror of that suggestion. And this was not only because the prospect of such a visit disturbed him beyond measure, but because he had not yet made a clean breast of it. Frances did not yet know all.

Frances for her part went to the blue room, and opened the *persianas*, and sat looking out upon the moonlight for some time before she went to bed. The room was bare; she missed her pictures, which Constance had taken no notice of—the Madonna that had been above her head for so many years, and which had vaguely appeared to her as a symbol of the mother who had never existed in her life. Now there seemed less need for the Madonna. The bare walls had pictures all over them—pictures of a new life. In imagination, no one is shy or nervous or strange. She let the new figures move about her freely, and delighted herself with familiar pictures of them and the changes that must accompany them. She was not like her father, afraid of changes. She thought of the new people, the new combinations, the quickened life, and the thought made her smile. They would come, and she would make the house gay and bright to receive them. Perhaps some time, surrounded by this new family, that belonged to her, she might even be taken

'home.' The thought was delightful, notwithstanding the thrill of excitement in it. But still there was something which Frances did not know.

OUTSIDE LONDON.

BY RICHARD JEFFERIES,

AUTHOR OF THE 'GAMEKEEPER AT HOME,' ETC.

II.

THE dismal pits in a disused brickfield, unsightly square holes in a waste, are full in the shallow places of an aquatic grass, Reed Canary Grass, I think, which at this time of mists stretches forth sharp-pointed tongues over the stagnant water. These sharp-pointed leaf-tongues are all on one side of the stalks, so that the most advanced project across the surface, as if the water were the canvas, and the leaves drawn on it. For water seems always to rise away from you—to slope slightly upwards; even a pool has that appearance, and therefore anything standing in it is drawn on it as you might sketch on this paper. You see the water beyond and above the top of the plant, and the smooth surface gives the leaf and stalk a sharp, clear definition. But the mass of the tall grass crowds together, every leaf painted yellow by the autumn, a thick cover at the pit-side. This tall grass always awakes my fancy, its shape partly, partly its thickness, perhaps; and yet these feelings are not to be analysed. I like to look at it; I like to stand or move among it on the bank of a brook, to feel it touch and rustle against me. A sense of wildness comes with its touch, and I feel a little as I might feel if there was a vast forest round about. As a few strokes from a loving hand will soothe a weary forehead, so the gentle pressure of the wild grass soothes and strokes away the nervous tension born of civilised life.

I could write a whole history of it; the time when the leaves were fresh and green, and the sedge-birds frequented it; the time when the moorhen's young crept after their mother through its recesses; from the singing of the cuckoo by the river, till now the brown and yellow leaves strew the water. They strew, too, the dry brown grass of the land, thick tufts, and lie even among the rushes, blown hither from the distant trees. The wind works its full will over the exposed waste, and drives through the reed-grass, scattering the stalks aside, and scarce giving them time to spring together again, when the following blast a second time divides them.

A cruder piece of ground, ruder and more dismal in its unsightly holes, could not be found; and yet, because of the reed-grass, it is made as it were full of thought. I wonder the painters, of whom there are so many nowadays, armies of amateurs, do not sometimes take these scraps of earth and render into them the idea which fills a clod with beauty. In one such dismal pit—not here—I remember there grew a great quantity of bulrushes. Another was surrounded with such masses of swamp-folage that it reminded those who saw it of the creeks in semi-tropical countries. But somehow they do not seem to see these things, but go on the old mill-round of scenery, exhausted many a year since. They do not see them, perhaps,

because most of those who have educated themselves in the technique of painting are city-bred, and can never have the *feeling* of the country, however fond they may be of it.

In those fields of which I was writing the other day, I found an artist at work at his easel ; and a pleasant nook he had chosen. His brush did its work with a steady and sure stroke that indicated command of his materials. He could delineate whatever he selected with technical skill at all events. He had pitched his easel where two hedges formed an angle, and one of them was full of oak-trees. The hedge was singularly full of 'bits'—bryony, tangles of grasses, berries, boughs half-tinted and boughs green, hung as it were with pictures like the wall of a room. Standing as near as I could without disturbing him, I found that the subject of his canvas was none of these. It was that old stale and dull device of a rustic bridge spanning a shallow stream crossing a lane. Some figure stood on the bridge—the old, old trick. He was filling up the hedge of the lane with trees from the hedge, and they were cleverly executed. But why drag them into this fusty scheme, which has appeared in every child's sketch-book for fifty years ? Why not have simply painted the beautiful hedge at hand, purely and simply, a hedge hung with pictures for any one to copy ? The field in which he had pitched his easel is full of fine trees and good 'effects.' But no ; we must have the ancient and effete old story. This is not all the artist's fault, because he must in many cases paint what he can sell ; and if his public will only buy effete old stories, he cannot help it. Still, I think if a painter *did* paint that hedge in its fullness of beauty, just simply as it stands in the mellow autumn light, it would win approval of the best people, and that ultimately, a succession of such work would pay.

The clover was dying down, and the plough would soon be among it—the earth was visible in patches. Out in one of these bare patches there was a young mouse, so chilled by the past night that his dull senses did not appear conscious of my presence. He had crept out on the bare earth evidently to feel the warmth of the sun, almost the last hour he would enjoy. He looked about for food, but found none ; his short span of life was drawing to close ; even when at last he saw me, he could only run a few inches under cover of a dead clover-plant. Thousands upon thousands of mice perish like this as the winter draws on, born too late in the year to grow strong enough or clever enough to prepare a store. Other kinds of mice perish like leaves at the first blast of cold air. Though but a mouse, to me it was very wretched to see the chilled creature, so benumbed as to have almost lost its sense of danger. There is something so ghastly in birth that immediately leads to death ; a sentient creature born only to wither. The earth offered it no help, nor the declining sun ; all things organised seem to depend so much on circumstances. Nothing but pity can be felt for thousands upon thousands of such organisms. But thus, too, many a miserable human being has perished in the great Metropolis, dying, chilled and benumbed, of starvation, and finding the hearts of fellow-creatures as bare and cold as the earth of the clover-field.

In these fields outside London the flowers are peculiarly rich in colour. The common mallow,

whose flower is usually a light mauve, has here a deep, almost purple bloom ; the bird's-foot lotus is a deep orange. The figwort, which is generally two or three feet high, stands in one ditch fully eight feet, and the stem is more than half an inch square. A fertile soil has doubtless something to do with this colour and vigour. The red admiral butterflies, too, seemed in the summer more brilliant than usual. One very fine one, whose broad wings stretched out like fans, looked simply splendid floating round and round the willows which marked the margin of a dry pool. His blue markings were really blue—blue velvet—his red, and the white stroke shone as if sunbeams were in his wings. I wish there were more of these butterflies ; in summer, dry summer, when the flowers seem gone and the grass is not so dear to us, and the leaves are dull with heat, little colour is so pleasant. To me, colour is a sort of food ; every spot of colour is a drop of wine to the spirit. I used to take my folding-stool on those long heated days, which made the late summer so conspicuous among summers, down to the shadow of a row of elms by a common cabbage-field. Their shadow was nearly as hot as the open sunshine ; the dry leaves did not absorb the heat that entered them, and the dry hedge and dry earth poured heat up as the sun poured it down. Dry dead leaves—dead with heat, as with frost—strewed the grass, dry, too, and withered at my feet.

But among the cabbages, which were very small, there grew thousands of poppies, fifty times more poppies than cabbage, so that the pale green of the cabbage leaves was hidden by the scarlet petals falling wide open to the dry air. There was a broad band of scarlet colour all along the side of the field, and it was this which brought me to the shade of those particular elms. The use of the cabbages was in this way : they fetched for me all the white butterflies of the neighbourhood, and they fluttered, hundreds and hundreds of white butterflies, a constant stream and flow of them over the broad band of scarlet. Humble-bees came too ; bur-bur-bur ; and the buzz, and the flutter of the white wings over those fixed red butterflies the poppies, the flutter and sound and colour pleased me in the dry heat of the day. Sometimes I set my camp-stool by a humble-bee's nest. I like to see and hear them go in and out, so happy, busy, and wild ; the humble-bee is a favourite. This warm summer their nests were very plentiful ; but although the heat might have seemed so favourable to them, the flies were not at all numerous, I mean out-of-doors. Wasps, on the contrary, flourished to an extraordinary degree. One willow-tree particularly took their fancy ; there was a swarm in the tree for weeks, attracted by some secretion ; the boughs and leaves were yellow with wasps. But it seemed curious that flies should not be more numerous than usual ; they are dying now fast enough, except a few of the large ones, that still find some sugar in the flowers of the ivy. The finest show of ivy flower is among some yew-trees ; the dark ivy has filled the dark yew-tree, and brought out its pale yellow-green flowers in the sombre boughs. Last night, a great fly, the last in the house, buzzed into my candle. I detest flies, but I was

sorry for his scorched wings ; the fly itself hateful, its wings so beautifully made. I have sometimes picked a feather from the dirt of the road and placed it on the grass. It is contrary to one's feelings to see so beautiful a thing lying in the mud. Towards my window now, as I write, there comes suddenly a shower of yellow leaves, wrested out by main force from the high elms ; the blue sky behind them, they droop slowly, borne onward, twirling, fluttering towards me—a cloud of autumn butterflies.

A spring rises on the summit of a green brow that overlooks the meadows for miles. The spot is not really very high, still it is the highest ground in that direction for a long distance, and it seems singular to find water on the top of the hill, a thing common enough, but still sufficiently opposed to general impressions to appear remarkable. In this shallow water, says a faint story—far off, faint, and uncertain, like the murmur of a distant cascade—two ladies and some soldiers lost their lives. The brow is defended by thick bramble-bushes, which bore a fine crop of blackberries this autumn, to the delight of the boys ; and these bushes partly conceal the sharpness of the short descent. But once your attention is drawn to it, you see that it has all the appearance of having been artificially sloped, like a rampart, or rather a glacis. The grass is green and the sward soft, being moistened by the spring, except in one spot, where the grass is burnt up under the heat of the summer sun, indicating the existence of foundations beneath.

There is a beautiful view from this spot ; but leaving that now, and wandering on among the fields, presently you may find a meadow of peculiar shape, extremely long and narrow, half a mile long, perhaps ; and this the folk will tell you was the King's Drive, or ride. Stories there are, too, of subterranean passages. There are always such stories in the neighbourhood of ancient buildings. I remember one, said to be three miles long ; it led to an abbey. The lane leads on, bordered with high hawthorn hedges, and occasionally a stout hawthorn tree, hardy and twisted by the strong hands of the passing years ; thick now with red haws, and the haunt of the red-wings, whose 'chuck-chuck' is heard every minute ; but the birds themselves always perch on the outer side of the hedge. They are not far ahead, but they always keep on the safe side, flying on twenty yards or so, but never coming to my side.

The little pond, which in summer was green with weed, is now yellow with the fallen hawthorn leaves ; the pond is choked with them. The lane has been slowly descending ; and now, on looking through a gateway, an ancient building stands up on the hill, sharply defined against the sky. It is the banqueting hall of a palace of old times, in which kings and princes once sat at their meat after the chase. This is the centre of those dim stories which float like haze over the meadows around. Many a wild red stag has been carried thither after the hunt, and many a wild boar slain in the glades of the forest.

The acorns are dropping now as they dropped five centuries since, in the days when the wild boars fed so greedily upon them ; the oaks are broadly touched with brown ; the bramble thickets in which the boars hid, green, but strewn with

the leaves that have fallen from the lofty trees. Though meadow, arable, and hop fields hold now the place of the forest, a goodly remnant remains, for every hedge is full of oak and elm and ash ; maple too, and the lesser bushes. At a little distance, so thick are the trees, the whole country appears a wood, and it is easy to see what a forest it must have been centuries ago.

The Prince leaving the grim walls of the Tower of London by the Water-gate, and dropping but a short way down with the tide, could mount his horse on the opposite bank, and reach his palace here, in the midst of the thickest woods and wildest country, in half an hour. Thence every morning setting forth upon the chase, he could pass the day in joyous labours, and the evening in feasting, still within call—almost within sound of horn—of the Tower, if any weighty matter demanded his presence.

In our time, the great city has widened out, and comes at this day down to within three miles of the hunting-palace. There still intervenes a narrow space between the last house of London and the ancient Forest Hall, a space of corn-field and meadow ; the last house, for although not nominally London, there is no break of continuity in the bricks and mortar thence to London Bridge. London is within a stone's-throw, as it were, and yet, to this day the forest lingers, and it is country. The very atmosphere is different. That smoky thickness characteristic of the suburbs ceases as you ascend the gradual rise, and leave the outpost of bricks and mortar behind. The air becomes clear and strong, till on the brow by the spring on a windy day it is almost like sea-air. It comes over the trees, over the hills, and is sweet with the touch of grass and leaf. There is no gas, no sulphurous acid in that. As the Edwards and Henrys breathed it centuries since, so it can be inhaled now. The sun that shone on the red deer is as bright now as then ; the berries are thick on the bushes ; there is colour in the leaf. The forest is gone ; but the Spirit of Nature stays, and can be found by those who search for it. Dearly as I love the open air, I cannot regret the medieval days. I do not wish them back again ; I would sooner fight in the foremost ranks of Time. Nor do we need them, for the spirit of nature stays, and will always be here, no matter to how high a pinnacle of thought the human mind may attain ; still the sweet air, and the hills, and the sea, and the sun, will always be with us.

OUR POULTRY AND EGGS.

It may surprise our readers to be told that the total head of domestic poultry in Great Britain and Ireland is at the present time nearly thirty millions, two-thirds of the number being common domestic fowls, the remainder turkeys, geese, and ducks ! This interesting fact has never been authoritatively made known till last year, during which a careful enumeration was taken of the poultry-stock of Great Britain. As regards Ireland, the egg and poultry supply of that country has been statistically known since the year 1876, when the fowls began to be counted once a year. It is wonderfully extensive, and contributes liberally to the national commissariat. Twelve months ago, the poultry-stock of all kinds

in the Emerald Isle was 'figured up' to over thirteen million head, more than half of the number being domestic fowls. Nearly every single head of poultry kept in Ireland is taken into account. It has not yet, however, been found possible to enumerate every fowl kept in England or Scotland; indeed, a very large number must have been omitted in the recent census, as those fed by cottagers were not taken into account; so that, in fact, if another million were to be added to the poultry figures of Great Britain, it would not probably be an exaggeration of the grand total, which is at present slightly over sixteen millions of individual fowls. But in addition to our home-grown supplies, we draw every year from foreign sources a contribution to the national poultry account of close upon six hundred thousand pounds; or including eggs, our imports of these luxuries of the table in the year 1883 amounted in value to more than three millions and a quarter sterling.

Accepting the fact that at a given date—mid-summer—we had thirty millions of all kinds of poultry on hand, it becomes interesting to know that, large as the number of domestic fowls undoubtedly is, it is simply the parent or breeding-stock from which we derive a portion of our daily food. That a fourth of the number of fowls enumerated will prove active in laying and perpetuating their kind, and that a considerable percentage of the number of eggs produced will be hatched, still leaving, however, a vast number for sale, may, we think, be taken for granted. The laying power of our barn-door fowls is being gradually improved; of late years, much attention has been given to the subject by breeders of poultry, and the number of eggs obtained from well-arranged 'crosses' has been much increased—from one hundred and sixty to a little over two hundred per annum having by special care in feeding and housing been procured from individual hens. A notable housewife of our acquaintance set aside two years ago a couple of pens of strong healthy hens—a cross, she told us, of Cochinchin and Spanish—for the purpose of observing and duly noting their powers of production. The number selected was thirteen, six in one pen, seven in the other. The fowls of each pen were fed with care, and were allowed a daily run of three or four hours over a quarter of an acre of fine turf ground. Without giving details of the quantity of food consumed, it may be mentioned that the thirteen hens produced in the course of the year two thousand two hundred and seventy-six eggs; and in each coop there was besides a hatching of chickens—twenty-one in all.

Taking the barn-door fowls of the United Kingdom overhead, the average number of eggs per hen, counting contingencies of all kinds, will be greatly less than is indicated by the above figures—namely, one hundred and seventy-five eggs, although there are thousands of individual hens which contribute two hundred per annum to the stock. Houdans, Andalusians, and Leghorns are splendid layers, so also are Hamburgs. But hens everywhere vary very much in their power of laying—some will lay five or six eggs a week for a period of nine months in the year; whilst others yield three, and in some cases only two, every seven days.

As regards the Irish hens, the number of eggs obtained from each laying-fowl has been variously estimated as ranging from seventy to a hundred and ten; and if it be set down, therefore, that each hen lays on an average eighty eggs per annum, that will be a very fair figure. The barn-door fowls of Great Britain produce a higher total; but then they are more cared for and better fed than the Irish fowls.

The total number of barn-door poultry in the United Kingdom being twenty millions, it may be taken for granted that one-fourth the number will be laying-hens. This it may be honestly confessed is an estimate, but it is one that has cost the writer some trouble to frame. It has to be borne in mind that the stock is always in a state of transition, and that a large number of the mature fowls are frequently engaged in producing chickens, to take the place of those which are sold. The male birds constitute a large percentage of the whole; indeed, a poultry-merchant recently told the writer that far more male than female birds were hatched in the course of a year; but this is a statement which requires confirmation. It is easy to suppose, however, that fewer hens pass through the hands of the dealers, as they, being the more valuable in virtue of their laying powers, are not sent to market till their services have been well utilised. As to the number of fowls which are consumed per annum in the United Kingdom, we ascertained, two years ago, from a Sussex* 'higgler' that it might be set down as being considerably over one-third, but not quite half of the stock in hand. The authority consulted was pretty certain to be well informed, as it is the business of a higgler or haggle to buy lean poultry from farmers and cottagers, in order to its being fattened for sale by persons who make a business of doing so—'crammers,' they are called. The higgler has a run of ground over which he is constantly travelling, picking up chickens every here and there for his employer, who prepares them for sale. Some of the English cottagers derive as much from their fowls in the year as twenty-two pounds, more than half of which is profit. In the county of Sussex a very large number of fowls are annually bred to be fattened for consumption; the number stated in the agricultural returns as stock is three hundred thousand one hundred and ninety-seven; but in reality it is much greater, as the enumeration was not extended to the smaller cottagers, who, however, are the most industrious breeders, and many of whom rear from twenty to a hundred and fifty chickens every year. Some of the crammers do a large trade. The fowls are now fed by machinery, the feeding process being accomplished with great rapidity; and the extent of trade in Sussex in the way of fowl-fattening may be judged from the fact that one firm has occasionally done business to the extent of close upon twenty-five thousand pounds in a year. Our informant told us that the trade was a growing one, and also that it was remunerative, especially to those fatteners who are clever

* The county of Surrey has also been long famed for its poultry; our present information, however, is based chiefly upon returns from Sussex.

in studying the state of the market. One industrious hand at the business, we were told, usually paid weekly wages to twenty-five persons. The fowls are of course fattened chiefly for the London poultry-vendors, and usually bring an average price of about three shillings and ninepence each. We have only in these notes, derived from our interview with the higgler, taken account of the barn-door fowls. Ducks, however, are also dealt with, likewise turkeys; but Sussex-fed fowls command a ready market.

Founding on the information of our informant, the Sussex chicken-seeker, we set down the home poultry supply as being eight millions of fowls per annum; and that number, calculated as being overhead of the value of two shillings each, represents the handsome sum of eight hundred thousand pounds. In this account we are not including the money derived from the sale of turkeys, ducks, or geese, of which over eight millions are fed in Great Britain and Ireland; and if the same proportions of these as of the barn-door fowls are brought to market, we may add the proceeds of four millions of these animals to our account at, say, the average figure of five shillings a head, which gives us a million pounds sterling. Turkey pouls and ducklings realise a high price in their season in the London markets, so that the average taken is a moderate one. The flesh of the turkey at some periods of the year commands in the shops of the London poultry-men two shillings a poundweight.

As every householder knows to his cost, the consumption of eggs is enormous, whether at the breakfast-table, or in the preparation of other foods. 'What are a dozen eggs here?' said recently to us the mistress of a well-to-do middle-class family of nine persons including two servants. 'They are but a sight. Six or seven are required at breakfast; one has to be beaten up to make meat for baby; whilst probably two or three will be needed twice a week for puddings. I have seen, indeed, when we have had a little company in the house, that a hundred eggs have been bought in the course of a week; and at the present high prices, I grudge the payment very much. But eggs are so handy, one cannot very well want them.'

'How many eggs do you go through here?' we asked the intelligent manager of a large railway hotel in the course of our inquiry into this subject.

'We need about two thousand a week in the summer season, and about a hundred and twenty a day at other times,' was the reply; and in a house which makes up three hundred beds, and on some days supplies as many breakfasts, the number given as being consumed could readily enough be credited.

Assuming the egg-eating population of the United Kingdom to number twenty million persons—leaving out of the calculation the very young and the very poor—and that each individual only consumed one egg per week, the number required would be ten hundred and forty millions! It is impossible, however, to calculate exactly the number of eggs we consume; but we know for certain that there were imported into this country, in the year 1882, eggs to the value of two million seven hundred and thirty-two thousand and fifty-five pounds; the exact number received for that sum being nine hun-

dred and forty million four hundred and thirty-six thousand one hundred and sixty individual eggs. In 1884 the number imported was in all likelihood much larger, as up to the end of August six hundred and eighty-one million six hundred and eighty-three thousand and forty had been received, the greater proportion from France; Germany and Belgium being also large contributors.

We come now to consider the question of our home supplies of eggs. As has been already stated, we possess twenty million head of poultry of the barn-door kind, and we do not propose to take note at present of the consumption of any other eggs than those of the common hen. Ducks' eggs and the eggs of the turkey are certainly offered for sale, but not to any remarkable extent. The number of productive fowls contributing to the egg-supply may be computed as being five millions, or a fourth of the entire stock represented as being in the country on a given day. The average number of eggs laid by each hen, exclusive of those engaged in breeding, we shall take at one hundred, which is a fair average as between those fowls which lay seventy per annum and others that lay three times that number. Assuming the foreign egg-supply of the year 1884 to have been one thousand millions, our own hens, it can be calculated—taking the five million layers overhead as each contributing a hundred marketable eggs—will give us five hundred millions, and the two sets of figures added together represent the consumption of eggs in the United Kingdom at the present time. The value of the lot, counted at one penny each, gives us a sum equal to six million and a quarter sterling!

The poultry and egg supply of the United Kingdom is derived from ten thousand different sources, each contributing so much to the total. There are not any poultry or egg producing farms on a large scale in the United Kingdom, nor, so far as we know, in any other country; the bringing to market of these luxuries of the commissariat affords remunerative employment to a large number of persons; and there is not a cottager in the kingdom but who could, if he does not already do so, add to his income by keeping a few laying-hens or other fowls. As has been shown, the sum of the national enrichment by the sale of poultry and eggs is a matter of millions sterling; and were we to add to the account the sums derived from the sale of game and wild-birds of various kinds, the total figures might be considerably augmented.

THE CHINA HOUSE BURGLARY.

IN THREE CHAPTERS.—CHAP. II.

For some time past it had been an accepted theory that the particular but unknown artists in burglary who had been troubling our division were 'foreigners,' who drove into business after nightfall; but I was now led to believe that this was a mistake. It seemed to me now much more probable that they were inhabitants of the division, having general knowledge of local men and things, and in particular having some ground for enmity to Mr Dorrington. The last point was a moral certainty, a thing that went without

saying, and in it I was hopeful I had at last got a *real* clue to the discovery of the band who had been so long and so pressingly wanted by our men.

I questioned Mr Dorrington on this head eagerly, but with sadly disappointing results. He had never had but the one man-servant, he explained—the old fellow who was still with him, and who doubled the parts of groom and gardener, and he was satisfied that he had nothing to do with the robbery. I knew the old man in question, and quite agreed with his master as to his innocence. The present maid-servants, Mr Dorrington went on, had been with him for a considerable period; and their predecessors in the household had left in a friendly way, to be married to respectable working-men who were for the most part known to himself. As to loafers, whom, as a guardian, he had dismissed when they had been attempting to quarter themselves or their families upon the rates—as to 'that sort,' they were to be numbered by scores. Some of them might of course be burglars or associates of burglars; but he had no knowledge or remembrance of anything pointing to any one man having been more likely than the others to have gone wrong that way.

Driven back in this direction, I resumed the routine line of inquiry by questioning the servants. As the cook, while anything but fair, was fat and more than forty, I could readily credit her emphatically expressed assurance that she had no followers. For other reasons, I could as easily believe a similar assurance upon the part of the kitchen-maid. With the housemaid, it was different. She was a pretty girl, with a rather determined expression of countenance. As I spoke to her, it struck me that her manner was at once nervous and guarded; nevertheless, she answered unhesitatingly. 'Yes,' she said, 'she had a sweetheart—name, Charley Wilson; occupation, a carpenter; worked for Parks and Crawford the builders; lodged in — Street, at the greengrocer's shop at the corner. Had known him pretty near two years, had walked out with him "off and on" for twelve months, and regularly for about six; had last seen him on Sunday, and was to meet him again next Sunday.'

'Was he allowed to visit her at the house?'

'Well, he had been till about two months ago.'

'And why not for the last two months?'

'Because master had objected to it. She didn't exactly know why. She supposed some one had been speaking against Charley to him. He had wanted to turn her against him; but she wasn't a girl of that sort. Charley had always behaved handsome to her, and never more handsome than lately. She knew, of course, that master meant well by her; but for all that, he was mistaken. And now, was there anything else I would like to know?'

'There was not,' I replied; and having added an apologetical remark to the effect that in these affairs one was bound to ask each member of the household a question or two, I left her.

Joining Mr Dorrington again, I told him what the girl had said, and asked him what were his reasons for forbidding the visits of her sweetheart.

'I'll tell you,' he answered. 'A member of the firm that he works for is a friend of mine, and I learned from him that this Wilson was a fast, flashy sort of fellow. He is given to billiards and betting, and loses time at his work. Such a customer is not likely to make a good husband to a decent girl; and as my servant is a decent girl, I wished to break off the courtship, for her sake.—But mind you, though I say he's a bad lot for a girl to take up with, I don't suppose for a moment he had anything to do with this robbery, if that's what you're driving at.'

'I hardly know that I am driving at it yet,' I said. 'So far, there is nothing like evidence; while at the same time it seems the only point worth following up. I don't think the housemaid knows anything; but though she answered straightforwardly, she had a look of having to pull herself together to do so; and unless I'm mistaken, she rather hopes than feels certain that it is impossible her lover could have had any hand in a job of this kind. Anyhow, a flashy, betting working-man is quite as likely as not to get into bad company. Again, this fellow is a carpenter; and you may take my word for it that it was no novice in the handling of carpenters' tools that cut out that wine-cellars lock; while you can see for yourself that those skits on the drawing-room walls have been done with a carpenter's pencil.'

'Leave you fellows alone to make things fit into any ideas you've got 'old of, or 'ave let get 'old of you,' was Mr Dorrington's uncomplimentary comment on this. 'However,' he concluded, 'I suppose you'll act on your own judgment, and it's no use to arguey.'

I bowed assent to the last proposition, and was passing out, when, as we came to the drawing-room, he threw open its door, and once more waving his hand towards the drawings on the wall-paper, asked: 'Do you make anything out of them yet?'

'Out of them,' I answered, taking a last good look at them, 'and out of the rough work in the garden, I of course make out that some or all on the job knew you, and didn't like you. And that, too, you see, would apply to this Charley Wilson, who, you may depend upon it, doesn't love you for trying to separate the girl and him.'

Leaving China House, I made my way to the greengrocery establishment at which I had been informed the lover of old Dorrington's housemaid lived. When I reached the premises, the proprietor had just returned from his rounds, and stood on the pavement removing the baskets, scales, and so forth, from his van, a decidedly smart one of its kind; and in that respect in keeping with its owner, who was a particularly smart-looking fellow. He answered my questions readily enough, and without evincing any special curiosity as to why they were asked.

'A Charley Wilson did lodge there,' he said, 'and did sleep there last night.'

'What time did he come home?'

'Well, they had been together to the *Greyhound* till half-past eleven, so that it would be a quarter to twelve when they got home; and Charley had gone straight to bed, leaving him to lock up.'

'But he might have gone out again after you were in bed.'

'Why, yes, he might; but as it happened, he didn't. He couldn't a done it without me knowing. Our door-fastenings go hard, and the door itself can only be shut—from the outside—with a bang. No one could go out without making a row that would wake a heavy sleeper, which I ain't. Besides, our young un was queer, and kept both the wife and me awake pretty well all through the night.'

This was conclusive so far; and it was not from any doubt of the greengrocer's truthfulness, but with an eye to giving something of roundness to my report, that I called at the *Greyhound*, and at the workshops in which Wilson was employed—only to find that my suspect had been at the public-house till the time named, and had duly turned up at work at six in the morning.

I was thus left without even a theory to suggest, and my official report was a very blank affair indeed—so far, that is, as the important point of detection was concerned.

The non-success of the police was duly recorded in the papers, and once more the locals came down heavily upon the Force. The bills announcing old Dorrington's offer of a hundred pounds reward were liberally displayed. For a week or two they were objects of interest to local students of wall literature; then they were rapidly covered by other and newer advertisements; and the China House burglary having fulfilled its nine days as a wonder, was speedily forgotten, the more especially as, within that period, another house in the neighbourhood was broken into, apparently by the same gang of burglars.

Other business coming in the way, I, too, ceased to have any special remembrance of the China House job, and seeing how unsatisfactory my connection with it had been, I was not sorry to forget it. As the event proved, however, this forgetfulness—for the time being, a blissful forgetfulness—was not destined to be permanent. Five months later—that is to say, in the April of the following year—I had occasion one day to make a visit to a notorious street in a low quarter of the division. A few of the inhabitants of the street, whose poverty, and not their will, consented to their living in such a place, were of the poor but honest class; but the bulk of the residents belonged to the no-visible-means-of-support, or habitual criminal classes. Though the street was a picture of poverty and squalor, a certain tavern flourished in it; and as I turned into it on the day in question, there was a disturbance outside the public-house. A plain-clothes man who has been any length of time in a division is as well known by sight to the shady characters of the district as any of them are to him. As I approached the scene of the skirmish, an under-sized, over-dressed, horsey-looking youth, apparently about seventeen or eighteen years of age, stepped out from the crowd, and addressing me in what was intended to be an authoritative tone, said: 'Mr Grainger, I give that man into custody.' 'That man' was the landlord of the public-house, who was standing in his own doorway.

'What do you charge him with?' I asked.

'Assault,' was the answer.

'Whom has he assaulted?'

'Me.'

'Yer lie, you varmint!' broke in the landlord, who had come up while we were speaking. 'I haven't assaulted you yet; but if you try your monkey tricks on with me again, I will, and properly too. I'll shake the sawdust out of you, you image!'

'I suppose you have been doing something to provoke an assault,' I remarked, addressing myself to the youth, who was standing his ground with a particularly self-satisfied air.

'O no; I haven't,' he retorted impudently. 'If you chaff a fellow a bit, and he ain't clever enough to pay you back in your own coin, that's not to say he's to come the rough-and-tumble line on you. This fellow had no right to take the law into his own hands. If he didn't like what I've done, he had his remedy; he knows where I live, and could have summoned me for proceedings calculated to lead to a breach of the peace.'

'You know all about it, then,' I said, without attempting to disguise a sneer.

'Yes; I do,' he rejoined. 'I know my rights, and I mean to stand on them; so, you do your duty, and take that man into custody.'

'Certainly not,' I replied. 'I have witnessed no violence, and can see no evidence of your having been assaulted. Since you are so knowing, you must be aware that you have *your* remedy. If you don't like what he has done, you can summon him—if you can persuade a magistrate to grant a summons.—And now, you had better go.'

'Or else you'll move me on, eh? You'd like a chance to run me in, wouldn't you? But you won't get it; I don't give openings; so, ta-ta,' and uttering this parting bit of bounce, he thrust his hands into his pockets and swaggered off, whistling a popular music-hall tune. He was playing to the gallery, and he had his reward. By a derisive guttaw directed at me, the onlookers expressed their admiration of his spirit, their satisfaction at hearing a detective 'bounced'; and having thus relieved their feelings, they departed.

'What is it all about?' I asked the landlord, when we were left alone.

'Why, he's been trying to take my character away,' was the answer.

'Oh!' I said, lengthening and accentuating the exclamation in a manner intended to make it convey more than met the ear. As a matter of fact, the character of mine host of the *Lion and Lamb* was of a kind that most people would have regarded as a reproach which they would have been more than willing to have had taken away. That he had never actually been in trouble was held—by the police at anyrate—to be due rather to his good fortune than his deserts. He was an open associate of habitual criminals; his house was used by well-known thieves; and he was an organiser and chairman of 'friendly leads' got up for the benefit of members of the local 'school' of law-breakers, for whom a defence fund was being raised; or who, having been 'put away' and done their time, found themselves in low water upon their return to the outer world.

Moreover, he was strongly suspected of fencing—that is, purchasing stolen property.

‘What has he been saying about you?’ I asked.

‘He ain’t exactly been a-sayin’ anythin’; it’s what he’s been a-doin’ of,’ was the somewhat oracular response.

‘And what might that be?’

‘I’ll show you, if you’ll wait a minute,’ he said; and as he spoke, he stepped briskly into the house, coming out again presently, having in his hand a sheet of paper about a foot square. ‘That’s what he’s been a-doin’!’ he exclaimed with angry emphasis, as he held the paper up to view. Fortunately, he was too excited himself to observe the effect produced upon me. At sight of the paper, my ‘heart was in my mouth,’ for the thing that had aroused the ire of the landlord was a drawing which at a glance struck me as having been done by the same hand that had drawn the caricatures upon the wall-paper of China House. Of so much I felt certain even before I realised the details of the picture. Here at last, and thus accidentally, I said to myself, I had really ‘got a clue’ to the China House job; though how it would work out, I had not for the moment the slightest idea. Commanding my manner as well as I could, I examined the drawing with real interest, but assumed indifference. It showed a man—intended to represent the landlord, and actually bearing some resemblance to him—standing over a crucible. From the mouth of the figure proceeded a scroll, on which was written: ‘Try our patent safety-pot, boys. Good prices given, and no questions asked.’ Under the drawing, by way of descriptive title, was inscribed: ‘The worthy chairman in “melting moments.”’

‘Wants to make you out a fence and melter?’ I remarked.

‘Yes; and that’s a kind of thing I wouldn’t stand, even if there had ever been anythin’ of the sort agen me, which you know there ain’t.’

‘Why should he have done it?’ I asked.

‘Well, partly, I expect, because I was going to chuck him out the other night for being impudent to the young woman as plays the piano at the Harmonic Meetings in my house; and partly just because he fancies himself good at this sort of thing. He sets up for being first-rate all round, and in particular reckons himself one of the touch-me-nots in the pen and pencil line.’

‘If he is the too-clever-by-half sort of customer you seem to think him, he may find pen and pencil are edged tools,’ I observed, by way of keeping up the conversation in such a manner as should not suggest to my man that he was being drawn.

‘I’m sure he will,’ agreed the landlord emphasising his assent by an expletive. ‘There’s not much doubt about his turning out a case of too bright to last. He’s a bad bred un; he’ll take to forgery, or something else in the eddicated swindling line.’

‘A bad bred un,’ I repeated. ‘Who is he, then?’

‘Why, Curley Bond’s son. I thought you knew him.’

‘O indeed,’ I said; and again I had to do all I could to speak in a tone of seeming indifference.

The mention of Curley Bond in this relation was to my mind confirmation strong of my belief that I had come upon the track of the China House burglars.

THE PROSPECTS OF NEW GUINEA.

Now that New Guinea seems destined either to be formally annexed or put under the protection of the British empire, a few notes in reference to the probable future development of the country and its internal resources may not be uninteresting. To begin with: there is no brilliant prospect in the immediate future, and it is only by dint of great energy and perseverance that anything will be made out of it in the future. Although there is splendid land for sugar, rice, tea, and coffee, nothing can be grown until the natives are induced to assist in their cultivation, and that alone will be a matter of long persuasion. Sago, on the other hand, is abundantly grown, and seems destined to become a considerable export; pepper and spices are already cultivated, and can be still further developed; whilst ginger, turmeric, and nutmegs can at the present time be had for the asking. Cocoa-nuts are also in fair abundance, and form a great source of trade amongst the natives themselves everywhere, for, besides being exchanged with the hill tribes for other articles of food, they form a substantial proportion of the dietary on the spot. The cocoa-nut trees are plentiful along the coast; but so far as knowledge at present goes, they are not to be found in great numbers inland. The manufacture of copra is not thought to have much chance of success, since it takes eight thousand nuts to make a ton of copra. Valuable timbers are known to exist in the country, but not at present in districts where it would be safe to work them. Various scented woods are to be had, and these may prove of value in the future; ebony is also abundant; and in many places, the natives have paddles, spoons, &c. made from the wood. So much for the vegetable produce from a commercial point of view. The flora of the country is at the same time very strange and interesting, and has many choice varieties and novelties to reveal to the enterprising botanist.

To the sportsman, New Guinea offers several attractions, as there is plenty of variety, though no large game. The plumage of the birds is magnificent, and so long as there is a demand for their feathers, will amply repay the trouble of procuring them. Béche-de-mer fishing has also great charms for white men, and there is a good field for it. The artist, traveller, and ethnologist will again each find a wide field of study. The scenery is of the grandest description, comprising huge forests, giant waterfalls, mountains, and plains; and the habits and customs of the people, together with their primitive weapons and implements, afford interesting subjects for speculation and research. The climate, in some places, is, however, a serious drawback to many enterprises which travellers and explorers of all kinds may in the future undertake. This is especially the case with regard to the explorations for gold produce. There seems no doubt that gold is in

the country, and to a considerable extent. Sir Roderick Murchison was of opinion that it existed in such quantities as ultimately to revolutionise its value in the world. So far, in a few places where it has been sought, only the colour has been obtained. The most likely locality for it is now said to be the Owen Stanley range, which is the watershed for the Fly, the Williams, and many other large rivers having outlets on the south-east coast. Almost insurmountable difficulties, however, exist in the way of reaching it. There are only two known approaches to the range from the coast, and they are more than hazardous. A succession of mountain ranges intervene, and across these no horse can travel; neither can native carriers be obtained. Rain falls daily in the ranges; and this fact, together with the rivers which would have to be swum, renders the enterprise of great physical risk as regards fevers and chills.

Another drawback would be in the probable collision of some or all of the party with the inhabitants of the various settlements which would have to be passed, and from which carriers would have to be obtained. So long as the white man behaves himself, it is true he has nothing to fear from the natives, and is generally welcomed. He may stay as long as he wishes in any of the villages along the coast, with the natives helping him in his work as he requires, provided they get what they want in return. This is generally tobacco, and the idea of a white man in a good many places resolves itself into a harmless foreigner who has unlimited supplies of tobacco, and who, for some insane reason, wishes to see the Papuans' territory. They are for the most part a harmless, lotus-eating, friendly people themselves; and they humour the white man in his desires so long as he does not interfere with theirs. There are, however, places where it would be dangerous to rely too much on this friendliness, as, for instance, from Aroma to Cloudy Bay, and in the adjacent islands. Many white men and Chinese have fallen victims; and the heads of Captain Webb's crew, with a few others, making altogether about seventeen skulls, form a trophy which is preserved with great pride. In some cases, Englishmen have received a friendly warning in time to quit a dangerous locality where the natives, in spite of good treatment and large presents, have shown a disposition for a little blood-letting; but this is principally in the inland districts. At South Cape and to the extreme east, again, where mission-teachers are established, the natives are very friendly, though it is now feared the 'labour operations' recently tried there may prejudice the natives against the white man for a long while to come.

The idea that seems so prevalent in our own country and in some parts of the colonies, that the country is open to any one who can take possession of it, is somewhat an erroneous one. As a matter of fact, there is not an acre of land without an owner, the lands being hunting-grounds and gardens for various tribes. It has been said that 'one of the first laws in the primitive community mainly existing on the product of the chase, is to protect the rights of individual hunters, and thus we find that among the most savage tribes there are certain hunting-

grounds, which, although apparently a wilderness, are nevertheless held by the right of acknowledged proprietors; and this is exactly the state of affairs with regard to land tenure in New Guinea at the present day.

The country abounds in extensive well-watered grazing-grounds; but until the land question is settled, the country will not offer any great facilities for pastoral pursuits. The settlement of these questions is certainly no easy one. A gentleman who was in partnership with another Englishman in what is known as the Kabadi 'land-grabbing' venture, has been in treaty with various tribes for some time past for a stretch of country for cattle-breeding purposes. The land is at the rear of the Verimana range, and reaches from Mann-Mann to Bootless Inlet, an area of about thirty miles by ten. For six months, he has been negotiating, and during that time he has obtained innumerable signatures to his form of agreement, and has thus acquired the lease of the land, according to our ideas, as well as distributed a fair amount of trade. However, as it is estimated that there are about five thousand individual owners whose rights have to be considered when the cattle arrive, it is probable troubles will begin.

One or two feasible suggestions seem already to have been made with regard to the land question. It is suggested on one side that the example of indigo and tea growers in India should be followed, and advances of seed and implements made to small growers on condition that the crops—for which an additional bonus would be granted—be given to the advancee. This has some doubtful aspects, however; and a more favourable settlement of the question seems to lie in an adaptation of the Javanese system of leasing lands through the government—that is, all transactions in land to take place through it, and it alone. Those who have spent any time in the country seem agreed that it is useless for any private individual or syndicate to attempt to take the matter in hand.

The great future difficulty would seem to be in inducing the natives to work. So far, their life is a very pleasant one; they hunt, fish, dance, fight now and again; but beyond eating, sleeping, and enjoying themselves, they have no thoughts. They have no cares for the future, no thoughts of the past, and it seems almost a pity to disturb a life so pleasant and primitive. They have a fine country, and they work just enough to provide themselves with their food; besides which, so much as they have seen of civilisation, they do not seem inclined to imitate. The greatest good of the greatest number is nevertheless the moving factor of modern life, and before that, the Papuans, we suppose, must bend. That they do not want either annexation or protection, has been pretty well shown; but in spite of that, we may hope that English interference, which arose primarily in a dread of the occupation of New Guinea by another power, which might prove troublesome to the colonists close at hand, may in the end be for the best. In time, no doubt, there will be much to repay enterprising colonists for their efforts to extract the riches of the country in all their varied forms; but until the country is more settled and the white man is better understood, trade will not develop very rapidly;

and the uncertainties in connection with transactions with the natives, and the risks of various kinds, not only from the people but the climate, will for a time at least outweigh any destined advantages.

ENSILAGE AND DAIRY CATTLE.

In a letter to the *Scotsman*, Mr E. T. Blunt, of Blaby Hill, Leicester, writes: 'I have several times been asked the question whether I considered ensilage a substitute for hay or roots. Will you allow me to give you the following figures? which, I think, conclusively prove that it is not only a substitute, but superior as a food for dairy cows to either one or the other, or even to both combined.'

Five acres of clover, producing ten tons of hay, will produce forty tons of ensilage. The cost of making it into hay, stacking, and thatching will be fifteen shillings per acre; therefore, if the value of the hay is four pounds per ton, the value of the crop for that purpose is £36, 5s. I find the cost of making ensilage to be 4s. 6d. per ton, including a fair charge for use and depreciation of silo and press; therefore, add nine pounds to the £36, 5s. and you have £45, 5s. as the value of the forty tons of ensilage, comparing it with hay at four pounds per ton. For several weeks I have fed five cows entirely upon ensilage, and find they consume three hundred and forty pounds per day, or 1 ton 1 cwt. 1 qr. per week, equal to 39 tons 6 cwt. 1 qr.—say forty tons—for thirty-seven weeks; the cost of which, ascertained as above, is £45, 5s. Thus, each cow will cost rather less than five shillings per week. The same number of cows, fed upon hay and roots, will consume four hundred pounds of roots and eighty pounds of hay per day; or for thirty-seven weeks, 46 tons 5 cwt. of roots and 9 tons 5 cwt. of hay. The roots, at fifteen shillings per ton, will amount to £34, 13s. 9d.; and the hay, at four pounds per ton, to thirty-seven pounds—a total cost of £71, 13s. 9d., or 7s. 9d. per cow per week. For five cows for thirty-seven weeks we have, therefore, a balance in favour of ensilage of £25, 8s. 9d., or 2s. 9d. per cow per week. Each system produces about the same quantity of milk; but the ensilage-fed cows are decidedly in the best condition; whilst their milk yields four or five per cent. more cream, and is as sweet and good as that from cows fed on grass in summer.

With such facts as these before me, I was rather surprised to see the notice issued by the manager of the Anglo-Swiss Condensed Milk Company that he would not use milk from ensilage-fed cows. I at once requested Dr Emerson, the public analyst for the counties of Leicester, Northampton, and Rutland, to analyse the milk from those cows which I had fed entirely upon ensilage for several weeks. The following is his Report: "The sample is of specific gravity 1034, and consists of the following percentages—Total solids, 13·120; fat, 3·300; solids not fat, 9·820; ash, '83; water, 86·880. These results represent a milk of first-rate quality; and prove that the food was nutritious, and that the cows had been in good health, so as to enable the mammary glands to secrete a milk so rich in albumen, fat, &c. The microscopic examina-

tion showed the usual abundant small oil globules, and absence of pus cells or any foreign matter."

In a letter accompanying his report, Dr Emerson says: "The only possible objection to silos can be when they are imperfectly constructed, so as to allow more air to reach the inclosed vegetable matter than admits of oxygenation beyond a certain amount, and decomposition begins; then, of course, the food would be unwholesome."

With reference to this, permit me to say that attention to two simple rules will insure good ensilage. The crop should be quite green and full of moisture when placed in the silo; then, after ten days or a fortnight, it should be subjected to a continuous pressure of not less than one hundred and fifty pounds to the square foot. I obtain this pressure by means of levers, which are easily adjusted and require little attention, and can be managed by an ordinary farm-labourer. The cost of the silo, hitherto a difficulty, need deter no one. I find that wooden silos make the best ensilage, and cost little.

With such facts as these before us, and also when we take into consideration that two crops for ensilage may be obtained in one year, that in making it we are quite independent of the weather, and that many crops may be grown on land now growing corn at a ruinous loss, which will give a much greater return per acre for ensilage than clover, I think we may look for still better results than the above, and may confidently rely upon our arable land thus becoming a source of profit, instead of loss, to us.'

A MEMORY.

An old-world country garden, where the hours
Like wing'd sunbeams flash in glory by,
And where the scent of strange old-fashioned flowers
Brings back a tender bygone memory.
The walks are straight, and patterned with white stone,
And pacing there with reverential tread,
I dream once more I hold within my own
The soft warm fingers of the child who's dead—
The child whose dainty footsteps vied with mine,
As we two chased the golden butterflies—
The child who revelled in the bright sunshine,
And shrank her gladness in her laughing eyes!
We used to linger in the long soft grass,
And when a sun-ray kissed her dimpled hand,
We told each other 'twas a fairy pass
To read the secrets of our Fairyland;
And, holding safely in her radiant face
That happy sparkle, we would run to peep
If dewdrops trembled in the self-same place,
Or last night's bud had blossomed in its sleep.
I throned her in my arms when tired of play,
And whispered love-names in the baby ears :
She made the glory of the summer's day,
My wee liege lady of but five short years !
And now? Small wonder that the roses lie
In petalled fragrance by the daisies' side,
For sunshine vanished with her last soft sigh,
And skies are grayer since our darling died.

M. E. W.

Printed and Published by W. & R. CHAMBERS, 47 Paternoster Row, LONDON, and 339 High Street, EDINBURGH.